

ABSTRACT

INVENTION TITLE: COMPACT SPRING RETURN ACTUATOR

5 Proposed is a compact spring return actuator. The
actuator includes a driving shaft configured to be rotated
by receiving a driving force from a motor, a driven shaft
configured to open and close a valve by being rotated by
the driving shaft, a deceleration means configured to
10 decelerate a rotational force that is transmitted to the
driven shaft, the deceleration means including a
differential planetary gear decelerator provided at the
driving shaft, and includes an emergency return means
provided with an elastic body and an actuation shaft which
15 is configured to convert an elastic force of the elastic
body to a rotational force and to transmit the rotational
force and which is engaged with the differential planetary
gear decelerator, thereby being configured to rotationally
return the valve when power is blocked.

20

[FIG. 3a]